

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (currently amended) A chimaeric virus particle derived from a plant virus having a coat protein with a beta barrel structure and modified by insertion of ~~an immunogenically active peptide~~ a peptide epitope of a tumour associated mucin at an ~~immunogenically effective site~~ exposed region in the coat protein in a loop connecting beta sheets.

2-4. (canceled)

5. (original) A chimaeric virus particle according to any of Claim 1, in which the tumour associated mucin is PEM.

6. (currently amended) A chimaeric virus particle according to Claim 5, in which the insert is a peptide comprising at least five amino acids of ~~derived from~~ the 20 amino acid repeat set forth in SEQ ID NO:1, of the extracellular portion of the MUC1 transmembrane molecule.

7. (currently amended) A chimaeric virus particle according to Claim 6, in which the peptide is a 16-mer, ~~preferably~~ set forth as SEQ ID NO:6, ~~or a 23-mer peptide, preferably SEQ ID 7.~~

8. (original) A chimaeric virus particle according to Claim 1, in which the plant virus is a comovirus.

9. (original) A chimaeric virus particle according to Claim 8, in which the plant virus is cowpea mosaic virus.

10. (original) A chimaeric virus particle according to Claim 9, in which the insert is present in the S protein of the virus.

11. (currently amended) A method for producing a chimaeric virus particle according to Claim 1, which comprises introducing a nucleotide sequence coding for the peptide epitope of a tumour-associated mucin ~~peptide~~ to modify the plant viral nucleic acid which codes for the coat protein; infecting plants, plant tissue, plant cells, or protoplasts with the modified viral nucleic acid; and harvesting chimaeric virus particles.

12. (canceled)

13. (currently amended) A method according to Claim 11, applied to an RNA plant virus, which comprises introducing a DNA coding for the ~~tumour-associated mucin~~ peptide epitope into a cDNA corresponding to the RNA of the plant virus which codes for an exposed portion of its coat protein; inoculating plants, plant tissue, plant cells, or protoplasts with the thus modified cDNA or an RNA transcript thereof, if necessary together with any other DNA or RNA required for multiplication and assembly of whole virus particles in the plant material; and harvesting chimaeric virus particles.

14. (currently amended) A method according to Claim 13, in which the modified cDNA is produced by introducing the DNA encoding the ~~mucin~~ peptide epitope into a DNA fragment excised from the plant viral cDNA, and reinserting the modified excised fragment so as to constitute the plant viral cDNA in modified form.

15. (original) A method according to Claim 11, in which modified virus produced, or RNA extracted therefrom, is passaged in plants to produce further yields of modified virus.

16. (original) A vaccine comprising chimaeric virus particles according to Claim 1 as an immunogenic component thereof.

17. (original) A vaccine according to Claim 16, further comprising an adjuvant.

18. (original) A vaccine according to Claim 17, in which the adjuvant is selected from Freund's complete adjuvant, QuilA, QS-21, ISCOM matrix, alum, alammulin; or combinations thereof.
19. (currently amended) A vaccine according to Claim 16, said vaccine being ~~substantially~~ free from exogenous adjuvant.
20. (withdrawn) A method of eliciting in an animal, including a mammal, an immune response characterized by the production of serum immunoglobulins specific for mucin peptides or polypeptides, which comprises the administration of an immunogenic complex.
21. (original) A chimaeric virus particle according to Claim 1 for use as a vaccine.
22. (canceled)
23. (new) A chimaeric virus particle according to Claim 6, in which the peptide is a 23-mer peptide set forth as SEQ ID NO:7.
24. (new) A chimaeric virus particle according to Claim 6, in which the peptide comprises the amino acid sequence set forth as SEQ ID NO:2.
25. (new) A chimaeric virus particle according to Claim 6, in which the peptide comprises the amino acid sequence set forth as SEQ ID NO:3.